REMARKS

Favorable reconsideration of this application is requested in view of the following remarks.

Claim 1 has been amended to include a limitation of viscosity as supported by the specification at page 26, line 24 – page 27, line 2; and claim 3 has been amended to limit a portion that is coated or impregnated partly or entirely to the surface of the materials as supported by the specification at page 27, line 24 – page 28, line 2.

Claims 16-50 have been added; new claim 16 includes all elements of previously presented claim 1 and current claims 2 and 15 and a limitation of a form of the hydrophobic substance (c) as a pulverized film or beads as supported by the specification at page 29, lines 24-26; claims 17-26 depending on claim 16 correspond to claims 4-12 and 14, respectively; new claim 27 includes all elements of previously presented claim 1 and current claims 3 and 15 and a limitation of diameters of the hydrophilic material (d1) and hydrophobic material (d2) as supported by the specification at page 35, lines 10-15; claims 28-37 depending on claim 27 correspond to claims 4-12 and 14, respectively; new claim 38 includes all elements of previously presented claim 1 and current claim 2, and a limitation of mixing a hydrogel of the crosslinked polymer (A) and the connection (RC) to form the absorbent resin particle as supported by the specification at page 31, lines 5-15; and claims 39-50 depending on claim 38 correspond to 3-12 and 14-15, respectively.

Claims 1, 3, and 11-12 have been rejected under 35 U.S.C. 102(b) as being anticipated by Nakanishi et al. (U.S. Patent No. 4,721,647). Applicants respectfully traverse this rejection.

Nakanishi discloses use of fiber base materials, i.e., a hydrophobic substance, such as a polyethylene-polypropylene fiber (ES fiber), rayon, and pulp, etc. (see example 1 at coln. 6, lines 29-38), which are solid fibers, and the refcrence fails to disclose the hydrophobic substance having viscosity in the range between 10-2000 mPa·s at 25°C as

claim 1 requires. Therefore, claim 1 is distinguished from the reference, and this rejection of claims 1, 3, and 11-12 should be withdrawn.

New claim 16 requires that the content of hydrophobic substance be 0.001-3 wt% based on a weight of the crosslinked polymer (A). Nakanishi discloses weights of the crosslinked polymer and the hydrophobic fiber web are 60 g/m^2 and 90 g/m^2, respectively, (see coln. 6, lines 22-38) and the content of the hydrophobic fiber web is much more than the upper limit of claim 16. Accordingly, claim 16 and its dependent claims 17-26 are distinguished from Nakanishi.

In new claim 27, the hydrophobic material is a material (D) which is a hydrophilic material (d1) or a hydrophobic material (d2) coated with a hydrophobic substance (C). Nakanishi discloses solid fiber as a hydrophobic substance but does not disclose that such solid fiber is a hydrophilic material (d1) or a hydrophobic material (d2) coated with a hydrophobic substance and that the core material has a volume-average particle diameter of 1-150 μm. Accordingly, claim 27 and its dependent claims 28-37 are distinguished from Nakanishi.

New claim 38 requires that the hydrogel of the crosslinked polymer (A) and the connection (RC) be mixed to form the absorbent resin particle. Nakanishi discloses that an aqueous solution including water-soluble monomers that are converted to a water-soluble polymer is dropped onto a fibrous base material containing a hydrophobic fiber (see coln. 3, lines 1-17). Accordingly, the structure of the absorbent resin particle of claim 38 is distinguished from that of Nakanishi, and claim 38 and its dependent claims 39-50 are distinguished from Nakanishi.

Claims 1 and 4-5 have been rejected under 35 U.S.C. 102(b) as being anticipated by Takemori et al. (U.S. Patent No. 5,075,373). Applicants respectfully traverse this rejection.

Takemori discloses use of hydrophobic materials in various forms such as a thermoplastic resin or elastomer (see coln. 5, lines 21-24 and coln. 6, lines 11-17), a hydrophobic sealant (see coln. 6, lines 59-64), a hydrophobic paint (see coln. 8, lines 29-34), a hydrophobic adhesive (see coln. 8, lines 57-62). Examples of the thermoplastic

resin disclosed by the reference are polyethylene, polypropylene ethylene-acrylic acid copolymers, ethylene-vinyl acetate copolymers, etc. in forms of molding articles, films, and sheets and examples of the elastomer are natural rubbers and synthetic rubbers (see coln. 5, lines 25-48 and coln. 9, lines 29-40). These thermoplastic resin and the elastomer are solid materials and do not satisfy the viscosity required by claim 1. Also, for the other forms listed above, the reference discloses uses of conventional commercially available hydrophobic sealants, paints, and adhesives and does not disclose specific types of these hydrophobic products having particular viscosity values of 10-2000 mPa·s as claim 1 requires. The viscosity of those commercially available products listed above changes while drying and would provide materials that have higher viscosity than that required by claim 1. Therefore, claim 1 is distinguished from Takemori, and this rejection should be withdrawn.

Claims 16 and 38 require a connection (RC) formed with the hydrophobic substance (C). Takemori discloses hydrophobic materials in the molding articles, films such as packing media for storing fresh vegetables, fish and the like and sheets for germination of seeds and seedling culture and the like, sealants, paints, and adhesives (see coln. 9. lines 29-51) but the reference fails to disclose these products having the connection (RC). In addition, the reference fails to disclose the hydrophobic substance (C) that is a pulverized film or beads as claim 16 requires.

Claims 16 and 27 require the content of the hydrophobic substance at 0.001-3 wt% based on the crosslinked polymer. However, Takemori discloses hydrophobic substance contents of 15-700 wt% of thermoplastic resin or elastomer, 50-2000 wt% of sealant, and 100-10000 wt% of paint to the water-absorbent resin that is mostly crosslinked resin (see coln 5, lines 49-58, coln. 7, lines 39-46, and coln. 8, lines 41-47, and preparations 1-4 at colns. 10-11). These hydrophobic contents are much more than the upper limit of 3 wt% as claims 16 and 27 require.

Accordingly, claim 16 and its dependent claims 17-26, claim 27 and its dependent claims 28-37, and claim 38 and its dependent claims 39-50 are distinguished from Takemori.

Claims 1, 6, 11-12 and 14 have been rejected under 35 U.S.C. 102(b) as being anticipated by Suskind et al. (U.S. Patent No. 5,849,816). Applicants respectfully traverse this rejection.

Suskind discloses non-colloidal, water resistant solid core materials such as water insoluble inorganic minerals, for example, silicon dioxide, titanium dioxide, etc. and water insoluble organic materials; for example, hull, bran, flour, etc. (see coln. 6, lines 3-24). Such solid core materials cannot satisfy the particular viscosity 10-2000 mPa·s that claim 1 requires. Accordingly, claim 1 is distinguished from Suskind, and this rejection should be withdrawn.

Claims 16 and 38 require the connection (RC) formed with the hydrophobic substance (C). Suskind discloses use of non-colloidal, water resistant solid core materials as a hydrophobic material and discloses examples as discussed above but fails to disclose that the hydrophobic substance forms the connection (RC).

Claims 16 and 27 require the content of the hydrophobic substance at 0.001-3 wt% based on the crosslinked polymer. Suskind discloses that the weight ratio of solid core to hydrogel forming polymer in the absorbent particle is at least about 1:4, i.e., 25 wt%, and as high as about 9:1, i.e., 900 wt%, (see coln. 5, lines 49-52), which is much higher than the ratio that claims 16 and 27 require.

Accordingly, claim 16 and its dependent claims 17-26, claim 27 and its dependent claims 28-37, and claim 38 and its dependent claims 39-50 are distinguished from Suskind.

Claims 1-3, 11-12, and 14 have been rejected under 35 U.S.C. 102(b) as being anticipated by Knack et al. (U.S. Patent No. 5,002,814). Applicants respectfully traverse this rejection.

Knack discloses super-absorbent fiber flocks that include absorbent polymers bound to polymer fibers (see coln. 2, lines 22-25). The polymer fibers that the reference discloses are polyolefin fibers such as polyethylene fibers, polypropylene fibers, cellulose fibers, glass fibers, or other synthetic fibers (see coln. 2, lines 62-64 and coln. 3, lines 6-14). These fibers disclosed by the reference are solid fibers and accordingly, do not

satisfy the viscosity required by claim 1. Accordingly, claim 1 is distinguished from Knack, and this rejection should be withdrawn.

Claim 16 requires that the hydrophobic material be a pulverized film or beads. As discussed above, Knack discloses that the hydrophobic material is polymer fibers, which are not a pulverized film or beads, as discussed above.

Claims 16 and 27 require the content of the hydrophobic substance is 0.001-3 wt% based on a weight of the crosslinked polymer. Knack, however, disclosed the ratio of 10:1 to 1:10 of hydrophobic fibers to absorbent polymer products (coln. 3, line 66 - coln. 4, line 5) and examples 1-3 show the ratios of 1:2, 1:3, and 1:2, respectively (see colns 5 and 6). Such ratios are much higher than the maximum of 3 wt% of the hydrophobic substance to the crosslinked polymer as claims 16 and 27 require.

Claim 27 requires the structure that a hydrophobic material (d2) is coated with a hydrophobic substance (C) and that the hydrophobic material (d2) has a volume-average particle diameter of 1-150 μm. Knack fails to disclose that the hydrophobic polymer fibers are coated with the hydrophobic substance. In addition, the reference discloses a length of the fibers at 0.2-10 mm, which is not equivalent to the average particle diameter as claim 27 requires (see coln. 2, lines 64-67).

Claim 38 requires use of hydrogel of the crosslinked polymer. Knack, however, discloses use of powdered crosslinked polymers (see examples 1-3 at colns. 5-6).

Accordingly, claim 16 and its dependent claims 17-26, claim 27 and its dependent claims 28-37, and claim 38 and its dependent claims 39-50 are distinguished from Knack.

Claims 7-10 and 13 have been rejected under 35 U.S.C. 102(b) as being anticipated by or, in alternative, under 35 U.S.C. 103(a) as being as obvious over Nakanishi et al. (U.S. Patent No. 4,721,647) or Knack et al. (U.S. Patent No. 5,002,814). Applicants respectfully traverse this rejection.

Neither Nakanishi nor Knack discloses a hydrophobic material having the viscosity in the range that claim 1 requires as discussed above. In addition, as shown in table 1 of the Declaration submitted by Mr. Tagawa attached hereto, examples of the Nakanishi reference do not satisfy the requirement of the diffusion absorption amount

required in claims 7 and 13, the absorption time (Z) required in claim 8, the formulae (2), i.e., (X), and (3), i.e., the relationship between (Z) and (Y), required in claim 9, and the formula (4), i.e., (Y), required in claim 10 (see also, paras. 1-3 of "3. Analysis of Results" at page 5 of the Declaration). Also, none of examples of Knack satisfies those requirements in claims 7-10 and 13 (see table 1 and paras. 1-3 of "3. Analysis of Results" at page 5 of the Declaration). As a result, the properties of the materials disclosed by Nakanishi and Knack are inferior to those of the material of the present application (see table 2 of the Declaration and table 3 at page 79 of the specification). Thus, claims 7-10 and 13 are distinguished from Nakanishi and Knack, and this rejection should be withdrawn.

Claim 16 and its dependent claims 17-26, claim 27 and its dependent claims 28-37, claim 38 and its dependent claims 39-50 are distinguished from Nakanishi and Knack as discussed above.

Claim 15 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Suskind et al. (U.S. Patent No. 5849816). Applicants respectfully traverse this rejection.

Claim 15, which refers to claim 1, is distinguished from Suskind for at least the same reasons as discussed above for claim 1. Accordingly, this rejection should be withdrawn. Applicants do not concede the correctness of the rejection.

Claim 16 and its dependent claims 17-26, claim 27 and its dependent claims 28-37, and claim 38 and its dependent claims 39-50 are distinguished from Suskind as discussed above.

In view of the above, Applicants request reconsideration of the application in the form of a Notice of Allowance.

Respectfully submitted,

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